Inflation and Nominal vs. Real Values

Nominal Value

- Simply a numeric representation of value
  - Menu prices
  - Advertised interest rates
  - Salary on a contract
  - Price of a Government Bond
  - GDP when calculated via C + I + G + NX

Real Value

- The nominal value MINUS the effects of inflation

- Real values allow for comparisons between time periods

- "How much will your dollar REALLY get you?"

How?

- To remove the effects of inflation, you need to know how much inflation has occurred
  - You need a **PRICE INDEX**

  - Most common is the **Consumer Price Index**

  - Comparison of the cost of a basket of goods over time

CPI

- **Market Basket:** List of commonly purchased items by the average family

- The weights of these items are "fixed" and the prices compared over time

- **Base Year:** The year to which all prices are compared

CPI - Calculating

- CPI = MB cost year "x" / MB cost base year

- *SEE ACTIVITY 2-4*

Nominal to Real Formula

- Once you have the CPI numbers, you can use the following formula to convert a nominal value into a real value:

(Nominal value of year 1/CPI of yr1) x CPI of yr2 =

ADJUSTING FOR INFLATION

Example:

Gas was **$3.75** a gallon in 2008
Gas was **$1.20** a gallon in 1974

Nominally, which year was Gas more expensive?

In which year was gas REALLY more expensive?

ADJUSTING FOR INFLATION

Using the following CPI Numbers, and the equation for adjusting for inflation, put BOTH gas prices in in terms of **2008 prices**.

In other words, what was $1.20 in 1974 the equivalent of in 2008?

2008 = $3.75

1974 = $1.20

CPI 2008 = 214

CPI 1974 = 49.3

Nominal val.Yr 1 / CPI of yr1 x CPI of yr 2 =

$1.20   /   49.3   x   214   =$5.21

Why does this matter?

- Inflation lowers the **purchasing power** of every dollar

- 2% inflation makes everyone able to by 2% less stuff with the same stock of money

- However, if you are REPAYING a loan, you get to now repay your loan with money that is worth 2% less

Why does this matter?

- For lenders, this is problematic because when you are repaid, your money is worth 2% less than when you lent it

- However, if you are REPAYING a loan, you get to now repay your loan with money that is worth 2% less

Numerical example

- If I lend $100 at 5% for one year, I expect to receive $105 nominal dollars at the end of that year that buys $105 worth of stuff

- However, if there has been 3% inflation in that same year, my $105 only purchases what $102 used to purchase.

Real GDP

- Calculating GDP through the expenditure approach includes current prices

- REAL GDP is more useful for calculating economic growth

- RGDP = (nominal GDP x 100) / CPI